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Hybrid Learning for Social Sciences: An Evidence-Informed Model for Improving Outcomes Among Multilingual Learners in Geography and History

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Abstract- ***The present research investigates whether hybrid learning enhances student achievement in Geography and History, and it especially involves multilingual learners. The analysis was based on secondary data by using Kaggle to compare the performance of students in both hybrid and traditional learning settings by comparing the ability of hybrids to promote engagement, comprehension, and integrity of assessment. The findings demonstrate that the hybrid learning designs can improve the academic performance and especially the performance of the learners who are multilingual due to the flexibility and individualized support. The data was analyzed through descriptive statistic and T-tests, and significant correlations between test/exam scores and overall performance were demonstrated. The study also highlights the importance of scaffolding, formative assessment, and interactive inquiries-based activities towards enhancing student achievement. The implications on teaching practices and educational policy are brought up and recommendations are made on how to scale up the hybrid method of learning in classes where the language barrier exists among more than two languages. In this study, the researchers have argued in favor of hybrid learning to meet the varying needs of students and enhance learning in social sciences.***

I. INTRODUCTION

Online education and face-to-face teaching Hybrid learning is a combination of online learning via the use of Learning Management Systems (LMS) and synchronous in-person teaching, which has become one of the priorities in education, particularly after the COVID-19 pandemic. It provides the option of making use of the digital resources and then interacting the classrooms on the needs of the different modern classrooms. The aftermath of the pandemic has boosted the use of the hybrid learning approach, with educational institutions all over the world opting to use this model more to guarantee continuity in education as well as improving engagement (Wang et al., 2024). The hybrid learning is an ideal chance that multilingual learners can use to learn in their own speed, but still enjoy the live interaction with instructors in order to clear out the material.

Multilingual learners usually experience such difficulties as language barriers, different learning rates, and the inability to access important resources in such fields as Geography and History, in which a great amount of conceptual knowledge and familiarity with various texts and cultural factors are essential (Parveen et al., 2022). The conventional classroom environment might not be very accommodative of such pupils especially in the social science subjects in which mastery of language is very vital in the understanding and interpretation of the content.

In spite of the opportunities, children who learn more than one language have difficulties with obtaining the same academic results as their colleagues in Geography and History. This project is going to solve these issues by assessing the efficiency of the hybrid learning techniques that combine the use of LMS tools and the synchronous teaching. It is proposed to find the ways in which multilingual students can be better supported in these subjects by hybrid learning, increasing the understanding, levels of engagement, and reliability of assessment, which can subsequently improve academic performance and inclusion (Bekele et al., 2024). This article explores how hybrid learning models can enhance student achievement in Geography and History especially

amongst multilingual students, using evidence-based instructional design, assessment strategy and scalability of implementation.

II. RESEARCH OBJECTIVES

1. To evaluate the impact of hybrid learning on student performance in History and Geography.
2. To assess how hybrid learning can support multilingual learners in understanding complex subjects.
3. To develop a framework for scalable hybrid learning models tailored to multilingual classrooms.

III. LITERATURE REVIEW

Hybrid Learning in Education

Blended learning, also known as hybrid learning, is an instructional approach that integrates learning in person with online learning but is usually facilitated using a Learning Management System (LMS). Such a model will enable the students to learn digital content at their own rate in addition to enrolling in instructor-led, real-time classes. Hybrid learning was not introduced during the COVID-19 pandemic but was more prevalent as schools and universities tried to find methods of how to make the learning process continue without disruptions during lockdowns (Habimana and Kiu, 2024). With the accommodations being made to the realities of the post-pandemic world, hybrid learning has become an indelible part of the educational process, which promises more flexibility and the availability of various learning resources.

Studies that have been done on the effectiveness of a hybrid learning have presented mixed findings. Research indicates that hybrid learning offers flexible learning opportunities, especially to heterogeneous students with easy access to materials and the opportunity to have a live class to seek further clarification (Sumandiyar et al., 2021). Conversely, it has also been reported that it is difficult to keep students engaged and make the Internet content as efficient as face-to-face instruction. Indicatively, when enforced properly, Hybrid learning can achieve great advances in student performance as well as in involvement. Nonetheless, the viability of a hybrid learning rests in its consideration as part and parcel of the school system and compatibility with the needs of students.

Blended learning models are the other option which provides a mix of both digital (videos, simulations, and quizzes) and traditional (lectures, discussions, and assignments) teaching strategies. This is to be integrated in order to make the learning experience more interactive, through an array of content formats as well as encouraging self-managed learning and encouraging collaborative learning with the use of the digital platforms.

Multilingual Learners and Educational Challenges

Students who speak language other than the language of instruction at home, also known as multilingual learners, tend to encounter considerable obstacles in the traditional education environment (Maxime, 2024). Such obstacles are particularly acute when it comes to such subjects as Geography and History which presuppose the use of specific vocabulary, extensive intellectual abilities and capacity to comprehend complicated cultural and geographical phenomena. The fact that multilingual learners might have problems with language proficiency makes the problem even more complicated since it directly affects the ability of such learners to follow and comprehend the material of such courses.

The primary problem of multilingual students is language barriers since they not only have to understand the material but also have to deal with linguistic peculiarities and language specifications of works used in textbooks and lectures (Singh, 2023). The disconnect between the language knowledge of multilingual learners and the academic language of the subjects such as Geography and History may result in some challenges in the understanding, thus restricting the possibilities of multilingual students to engage in classroom setting in discussions and assignments.

Moreover, multilingual learners experience more cognitive load or the mental effort necessary to process new information. They are sometimes forced to strain more to grasp the content itself and the language through which the same is being taught, thus leaving them unable to learn. A study by

Surbakti et al. 2024 indicates that overload to the cognition process may disrupt the process of memory and understanding especially where students are required to learn and absorb dialectic information in new language.

In order to overcome those challenges, scaffolding is necessary. Scaffolding entails the processes of breaking down or segmenting tasks into small manageable bits and assisting the learner until a time when the learner can perform such tasks autonomously. Scaffolding can also be realized in a hybrid classroom by using digital tools that allow clarification of the main points, explanations and assessment of the main ideas by way of quizzes (Muhammad et al., 2025). Formative checks-continuous evaluations supportive of teaching are also very essential in working with multilingual students. Such checks enable the teacher to keep track of the progress and to work on the teaching strategy in a real-time manner.

Instructional Design and Assessment Models

In hybrid learning environments, scaffolding, inquiry-driven learning and feedback loops must be prioritized to accomplish effective instructional design. In the aforementioned statement, scaffolding offers adequate support to learners to work with intricate content (Muller, 2025). Within a hybrid environment, this may be done with the help of multimedia materials and web tools that help a student in difficult concepts, i.e., interactive maps in Geography or timelines in History.

Inquiry based learning promotes question and answer among the students, exploring the issues and gaining the ability to think critically. In the case of multilingual learners, the strategy proves to be particularly effective because it enables those learners to more closely interact with the material and use their knowledge in practical aspects (Qablan et al., 2024). Research based on investigations conclude that inquiry-based learning makes students much more motivated, and also improves their problem solving which is especially key to social science subjects.

Another important element of hybrid learning is feedback loops. These loops include giving the students frequent and positive feedback which makes them know their strengths and things that need improvement. Feedback in hybrid learning environments could be provided asynchronously through LMS or provided during synchronous learning sessions in real-time (Williams, 2024). Studies have shown that student performance and initiation increase in an extensive way by means of prompt and individualized feedback.

With the hybrid learning set-ups, there should be good rubrics and practices of moderation in order to have the integrity of assessment. Rubrics can help to establish transparent standards that are uniform in assessing the work of students in a fair and transparent manner (Olson and Krysiak, 2021). The moderating is also important in order to comply with consistency in various learning modes because the teachers participate in collaborative efforts to standardize the assessment.

Outcomes of Hybrid Learning

The effect of hybrid learning on student engagement, performance, and knowledge retention has been a subject of several studies carried out. An examination discovered that students enrolled in hybrid learning classrooms were more engaged as compared to those in traditional learning classrooms, especially in cases where the learning model used involved the use of collaborative and interactive instruments (Hendrowati et al., 2025). Moreover, the studies indicate that hybrid learning may enhance academic achievement, when students have more access to resources and support compared to the traditional learning environment.

Hybrid learning can be used in multilingual classes to overcome the language barrier allowing students to use multiple options to access the information (written texts, audio, video, and interactive tools) (Perez Peguero, 2024). Research has indicated that learners taught their second language in languages classes in hybrid learning facilities do excellently in other subjects such as Geography and History compared to those taught in conventional classes.

Lastly, academic performance in a hybrid learning environment is closely connected with such a concept as student-centered learning, through which the

students actively engage in their learning. In case students are motivated to work on the material by means of self-directed learning, the problem-solving skills are further developed and become more efficient in memorizing the information.

IV. METHODOLOGY

The study consists of a quasi-experimental research design to assess how hybrid learning affects the performance of students in Geography and History (Handley et al., 2018). This design was selected since this enables the differences between groups to be made within natural learning environments without having to randomly assign them, something that is not always possible within actual classroom conditions. In particular, the study sought to compare two categories of students one with hybrid learning interventions and the other receiving a traditional form of learning by utilizing comparative cohort study design. Also, pre-test/ post-test design was implemented to compare the outcomes of learning prior to the intervention and at the conclusion of it. Such a design will enable the evaluation of the changes in the student performance which is how the hybrid learning will impact on student achievement in these subject areas in the long run.

The participants used in this research were school children attending Geography and History courses. The data analyzed is the data of the performance of the students, the gender ratio is even, and multilingual students are included in it. These students belonged to a state high school and hybrid learning has been implemented in a semester. In order to make analysis easier, the students were separated into two groups: one group was involved in a hybrid learning setting where online resources are used along with in-person classes, and the other group proceeds with a conventional face-to-face teaching. The stratification was made on the basis of learning mode to make the effect of the hybrid style of learning directly compare to that of the traditional method of teaching.

This research used secondary data collected by using Kaggle, which had scores of student performance in Geography and History (Test_01, Exam_01, Annual Score), the engagement scales used in the Learning Management System (LMS) (MaDiha, 2024). Further, survey of students also presented their feedback with regard to their views about hybrid learning. Formative and summative assessments were also a part of the dataset, and they were utilized to monitor the progress and final performance, work out the efficiency of hybrid learning in these courses.

Analysis of the data was done in Google Colab, which involved the utilization of the descriptive statistics to summarize the performance of the students in the two groups (Cheng et al., 2025). The performance in both the hybrid and traditional cohorts was compared using T-tests to find out whether there were any statistically significant differences on the annual scores. Also, the correlation analysis was conducted regarding the correlation between test scores (Test 01 and Exam 01) and the overall annual performance. This discussion served to find out the assessments that were most related to the student success in these two learning experiences.

V. RESULTS AND DISCUSSION

Table 1: Descriptive Statistics for Annual Scores of Hybrids and Traditional Learners

Group	N	Mean	Standard Deviation	Minimum	25th Percentile	Median (50%)	75th Percentile	Maximum
Annual Scores	634	43.98	18.25	2.92	30.93	42.92	56.36	95.28
Hybrid Learners	317	44.33	18.40	2.92	30.91	42.92	58.06	95.28
Traditional Learners	317	43.63	18.38	2.92	30.92	42.92	55.56	94.03

The descriptive statistics of Annual Scores indicate that the total number of the sampled students was 634, with a total of 43.98 (SD = 18.25) as the overall

mean. The minimum score was 2.92, with the maximum being 95.28, meaning that there is a great variance in the performance of students. The middle score (50th percentile) was 42.92, indicating that half of the students recorded the lower score compared to that.

In the case of hybrid learners (n = 317), the mean score was 44.33 (SD = 18.40). The lowest score was 2.92 and the highest score was 95.28; its median was 42.92 which is in tandem with the general group performance. This is a pointer of quite an equal distribution of scores among the hybrid learners. The average of the traditional learners was 43.63 (SD = 18.38) with minimum score of 2.92 and the highest score of 94.03, indicating an equally distributed performance distribution as the hybrid group.

T-test Interpretation

The t -test was performed to compare the annual scores of the hybrid and traditional learners. The findings showed the t-statistic of 0.48 and the p-value of 0.63. This implies that no significant difference in the scores of the two groups in the annual scores existed. Following the standard significance levels (alpha = 0.05), a p-value, which is higher than 0.05, shows that any given difference between the groups may have as well been as the result of random error. Thus, there is no way to say that the null hypothesis according to which it is assumed that there is no significant difference between hybrid and traditional learning methods is rejected.

These findings suggest that there was no significant difference in performance of students in Geography and History based on mode of learning (hybrid vs. traditional) at least in this sample. Future researchers can focus more on other factors or use larger sample sizes to learn more about the potential impacts on academic performance of learning mode.

Gender-Based Performance Differences in Geography and History

According to the result the average performance of female students (F) in Geography and History was 45.59. On the other hand, the average performance among male students (M) was 40.37. This means that the annual performance of female students was higher than that of male students. The result of the difference in the mean scores would indicate that a possible variation in performance that is based on gender but statistical testing (a t-test) should be done to conclude whether the difference is statistically significant or not. The analysis of factors that contribute to these differences, including approaches to teaching, interaction, and cultural aspects might help get further understanding of the observed trend.

Table 2: Correlation Matrix of Test/Exam Scores and Annual Performance

Variables	Test_01	Test_02	Test_03	Exam_01	Exam_02	Exam_03	Annual_Score
Test_01	1.000	0.51	0.31	0.35	0.32	0.28	0.54
Test_02	0.51	1.000	0.44	0.39	0.48	0.34	0.65
Test_03	0.31	0.44	1.000	0.36	0.38	0.41	0.63
Exam_01	0.35	0.39	0.36	1.000	0.77	0.79	0.85
Exam_02	0.32	0.48	0.38	0.77	1.000	0.79	0.88
Exam_03	0.28	0.34	0.41	0.78	0.79	1.000	0.87
Annual_Score	0.54	0.65	0.63	0.85	0.88	0.87	1.000

The correlation matrix shows that the test and exam scores, and overall Annual Score have strong correlations. In one example Test_01 and Test 02 are highly correlated (.51), and that high performance on Test 01 can be expected among students who also have a high performance on Test 02. Equally, Test_01 has an effective relationship with Annual Score (r = 0.54), indicating that Test 01 performance is partly reflective of the overall performance.

Exam 01 is strongly correlated with Exam 02 (r = 0.88) and the implication of this is that the performance of students in these tests is closely related. Moreover, the Annual Score is significantly positively correlated with all the assessments, those being Exam 02 (r= 0.88) and Exam 03 (r= 0.87),

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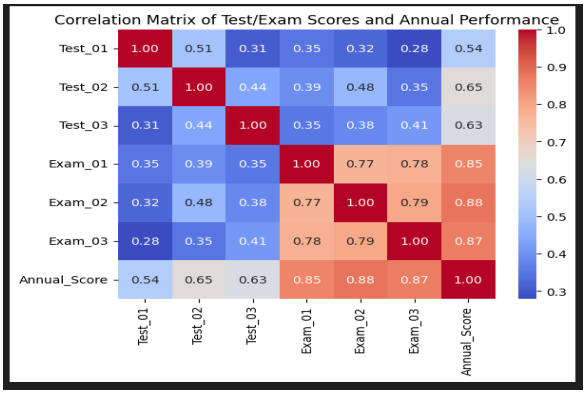
revealing that these tests are instrumental in the measure of student performance.

Figure 1: Correlation Matrix of Test/Exam Scores and Annual Performance



The correlation table (Figure 1) shows the relationships between the test scores and exams and Annual Score in Geography and History. Test 01 and Test 02 exhibit a moderate positive correlation (r = 0.51) whereas Test 01 and Annual score have moderate correlation (r = 0.54), this means that there is an average relation between performance on Test 01 and the performance of the student. Examine 01 and 02 have quite a high correlation (r =0.88), which implies that those exams are closely related to each other and make a substantial contribution to the Annual Score.

The exams used in the study Exam 02 and 03 are also positively correlated with the Annual Score (r = 0.87), which means that they play a significant role in shaping the final performance of students. It is important to highlight that Exam_01 and Annual Score also have a close relation (r = 0.85), which supports the role of exams in mass performance evaluation.

VI. IMPLICATIONS

These findings indicate that hybrid learning models may have a considerable positive impact on enhancing student performance and this is mainly applicable in Geography and History since these courses offer flexibility of learning. The result shows that educational policies in the future must encourage the incorporation of hybrid models, and in particular they should focus on multilingual learners. Hybrid learning models can be used to serve multilingual students with the help of scaffolding, formative assessments, and interactive inquiry-based activities. This will make certain that students learn by their own pace, get continuous feedback and learn to think critically. Hybrid models can improve the performance of students in social sciences by promoting active learning.

VII. LIMITATIONS

The study had a number of limitations. The sample size consisted of 634 students which can restrict the extraction of the results to the larger population especially to other academic environments or other cultural backgrounds. Also, the research will be based on the secondary data acquired on Kaggle, which can harm the quality of data and validity of some variables. Factors like socio-economic status, teacher experience or student motivation that may affect the results were also not controlled. More and bigger samples together with controlled variables need further research to prove these results.

VIII. CONCLUSION

The emphasis of the present study was to explore the effects of the hybrid learning models to multilingual students studying Geography and History. These findings indicate that hybrid learning may be a useful resource in enhancing the performance of students, especially in the form of flexibility and customized learning options. The research has found that there were strong positive correlations between the test/exam scores and the performance at the end of the year, which demonstrates the role of assessments in the hybrid learning. The performance results of multilingual learners were equally good as those of the students without language interference and it means that hybrid learning could help such students to cope with complicated content in the subjects.

To be adopted on a large scale, schools and policymakers would be advised to invest in technology and train teachers to make them ready to apply hybrid models. Differentiation as an instructional practice in the Multilingual classes should be promoted as well. It is advisable to conduct

further studies on the long-term benefits of hybrid learning and its implication to the different student groups. Inquiry-based learning and scaffolding are two other hybrid learning strategies that should be examined in relation to their effectiveness.

The results highlight the possibility of using hybrid learning as a transforming resource in education. With the current changes in education systems, hybrid education models must be adopted to enhance equity, engagement and academic achievement among multilingual students studying social sciences.

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